50. STATE OF MARYLAND

DHMH

Maryland Department of Health and Mental Hygiene
201 W. Preston Street • Baltimore, Maryland 21201
Martin O'Malley, Governor – Anthony G. Brown, Lt. Governor – Joshua M. Sharfstein, M.D., Secretary

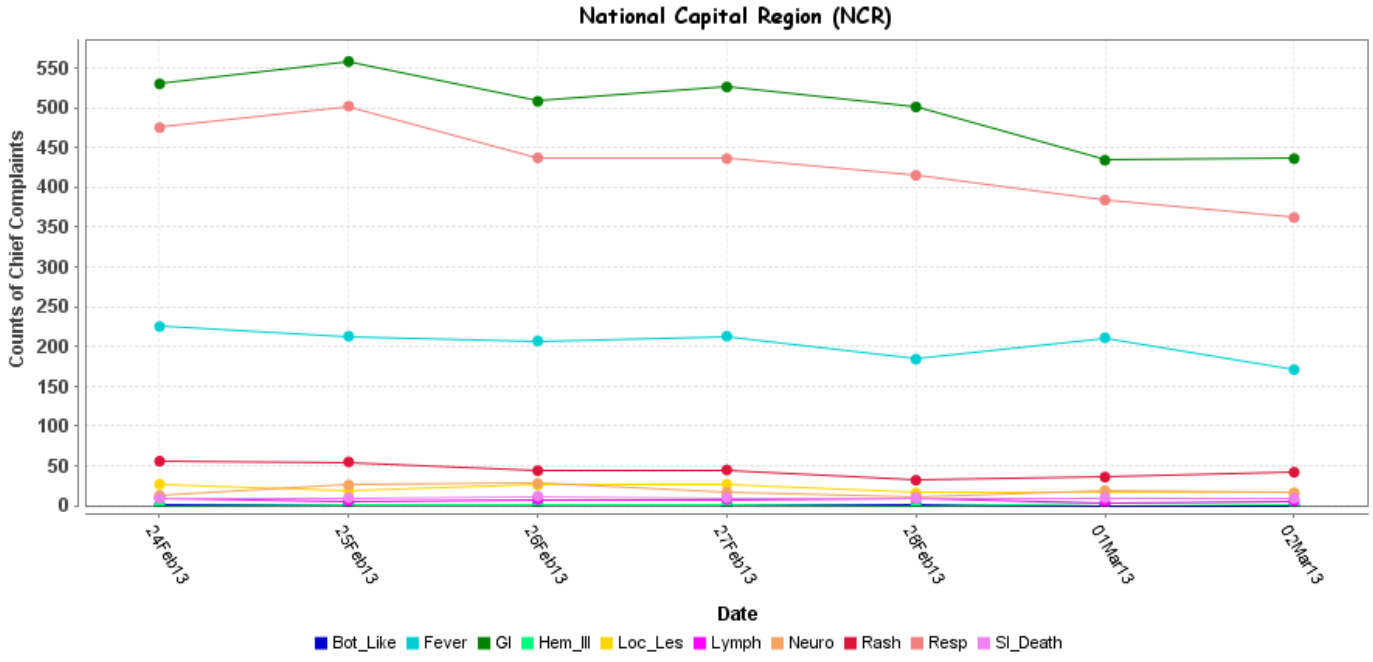
March 8, 2013

Public Health & Emergency Preparedness Bulletin: # 2013:09
Reporting for the week ending 03/02/13 (MMWR Week #09)

CURRENT HOMELAND SECURITY THREAT LEVELS

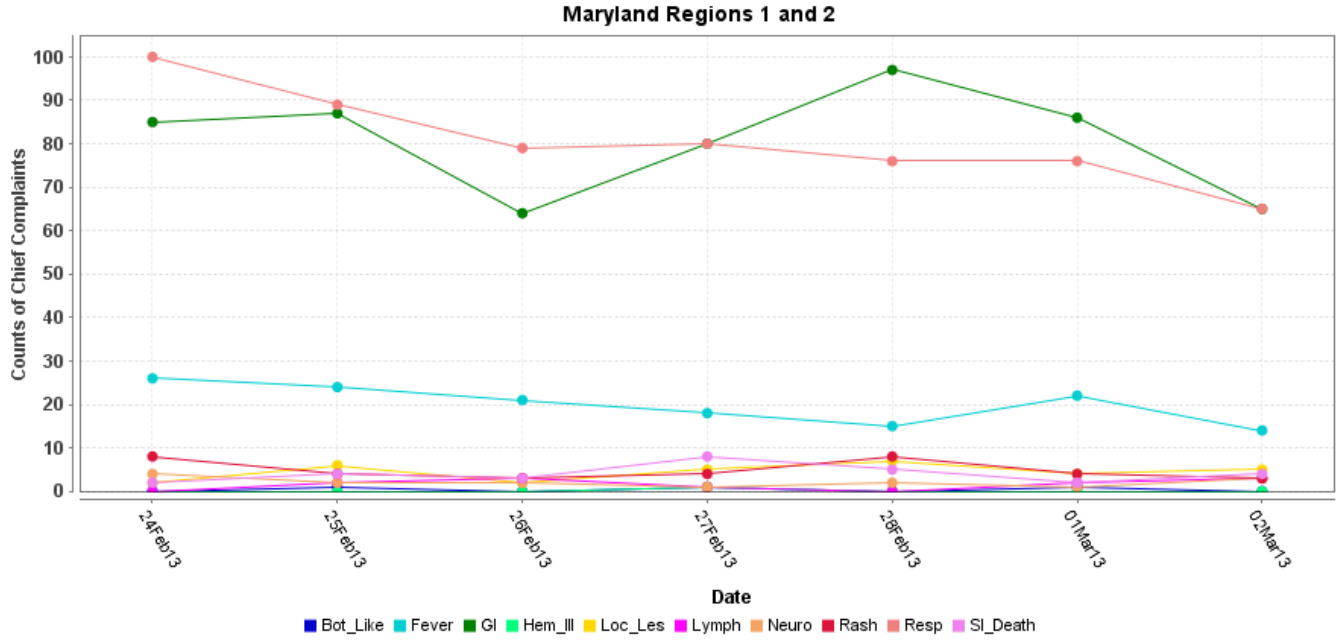
National: **No Active Alerts**
Maryland: **Level One (MEMA status)**

SYNDROMIC SURVEILLANCE REPORTS
ESSENCE (Electronic Surveillance System for the Early Notification of Community-based Epidemics):
Graphical representation is provided for all syndromes, excluding the "Other" category, all age groups, and red alerts are circled. Red alerts are generated when observed count for a syndrome exceeds the 99% confidence interval. Note: ESSENCE – ANCR uses syndrome categories consistent with CDC definitions.
Overall, no suspicious patterns of illness were identified. Track backs to the health care facilities yielded no suspicious patterns of illness.

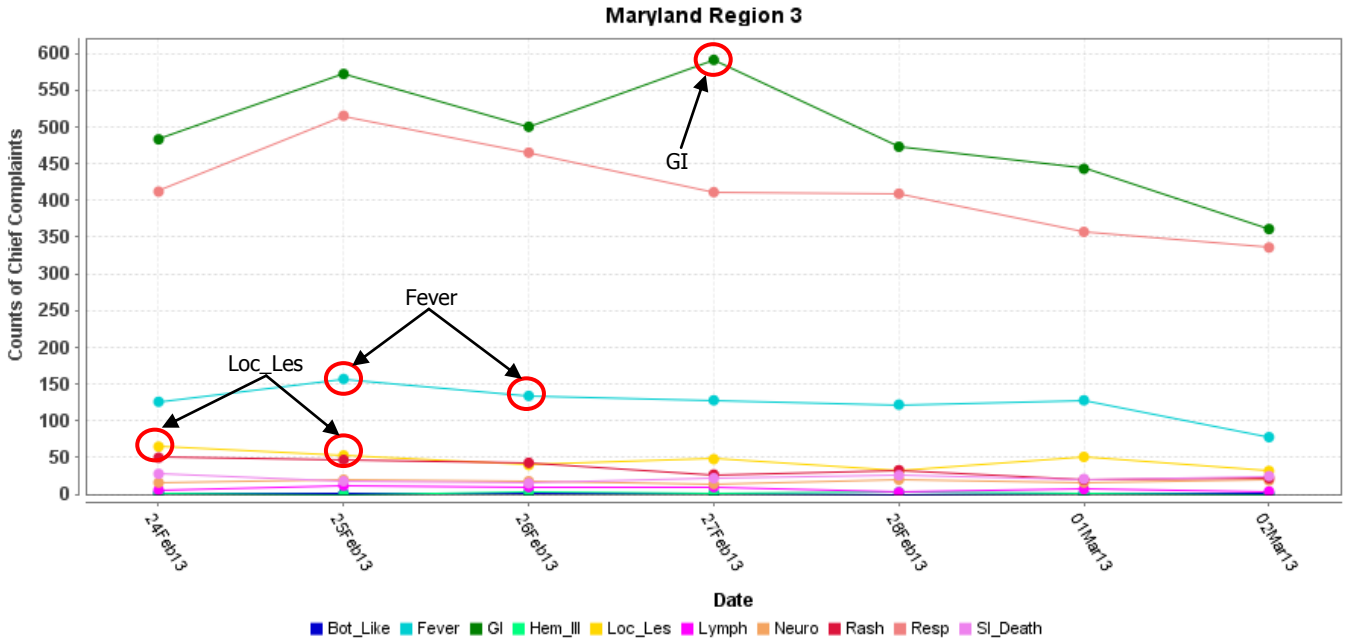


*Includes EDs in all jurisdictions in the NCR (MD, VA, and DC) reporting to ESSENCE

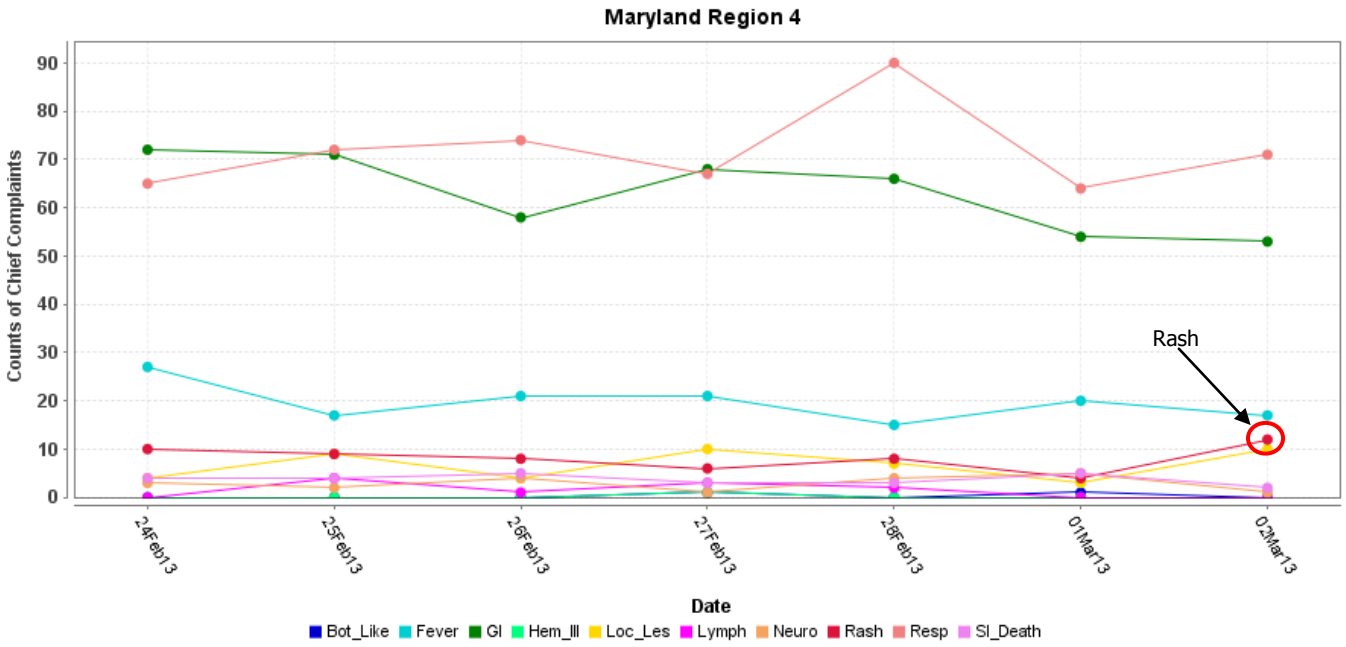
MARYLAND ESSENCE:



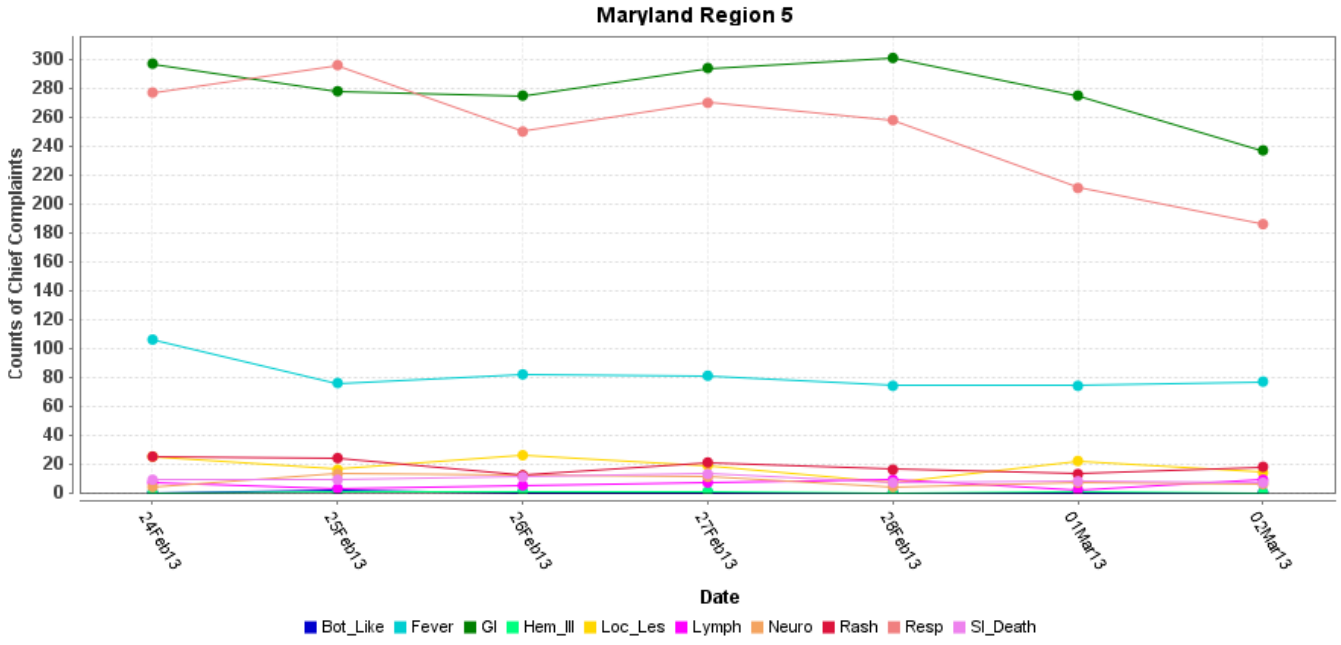
* Region 1 and 2 includes EDs in Allegany, Frederick, Garrett, and Washington counties reporting to ESSENCE



* Region 3 includes EDs in Anne Arundel, Baltimore City, Baltimore, Carroll, Harford, and Howard counties reporting to ESSENCE



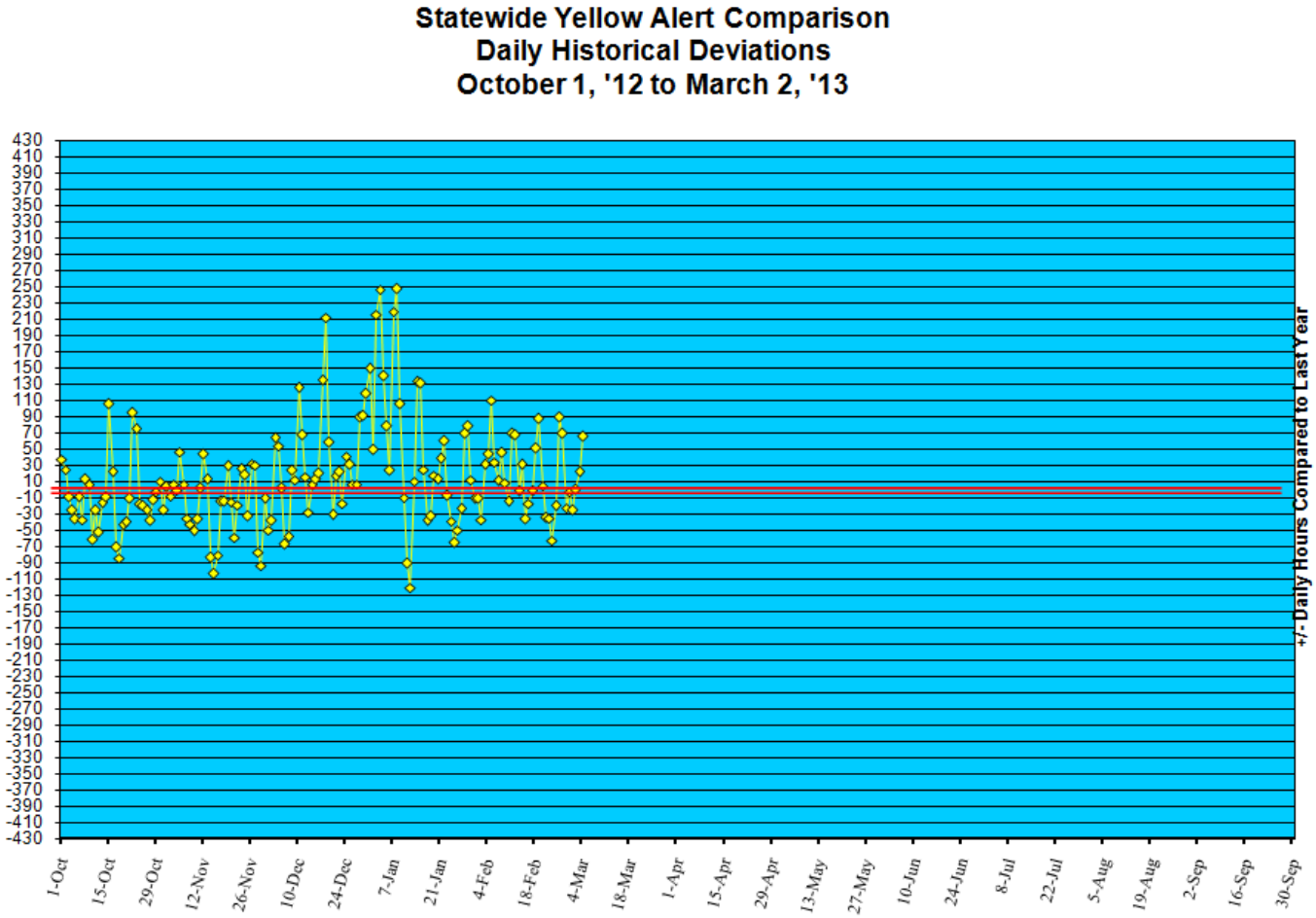
* Region 4 includes EDs in Cecil, Dorchester, Kent, Somerset, Talbot, Wicomico, and Worcester counties reporting to ESSENCE



* Region 5 includes EDs in Calvert, Charles, Montgomery, Prince George's, and St. Mary's counties reporting to ESSENCE

REVIEW OF EMERGENCY DEPARTMENT UTILIZATION

YELLOW ALERT TIMES (ED DIVERSION): The reporting period begins 10/01/11.



REVIEW OF MORTALITY REPORTS

Office of the Chief Medical Examiner: OCME reports no suspicious deaths related to an emerging public health threat for the week.

MARYLAND TOXIDROMIC SURVEILLANCE

Poison Control Surveillance Monthly Update: Investigations of the outliers and alerts observed by the Maryland Poison Center and National Capital Poison Center in January 2013 did not identify any cases of possible public health threats.

REVIEW OF MARYLAND DISEASE SURVEILLANCE FINDINGS

COMMUNICABLE DISEASE SURVEILLANCE CASE REPORTS (confirmed, probable and suspect):

Meningitis:	**Aseptic**	**Meningococcal**
New cases (February 24 – March 2, 2013):	7	0
Prior week (February 17 – February 23, 2013):	3	0
Week#9, 2012 (February 26 – March 3, 2012):	15	0

9 outbreaks were reported to DHMH during MMWR Week 9 (February 24-March 2, 2013)

6 Gastroenteritis Outbreaks
4 outbreaks of GASTROENTERITIS in Nursing Homes
2 outbreaks of GASTROENTERITIS in Schools

2 Respiratory illness outbreaks
2 outbreak of INFLUENZA in Nursing Homes

1 Other Outbreak
1 outbreak of METHEMOGLOBINEMIA associated with an Office Building

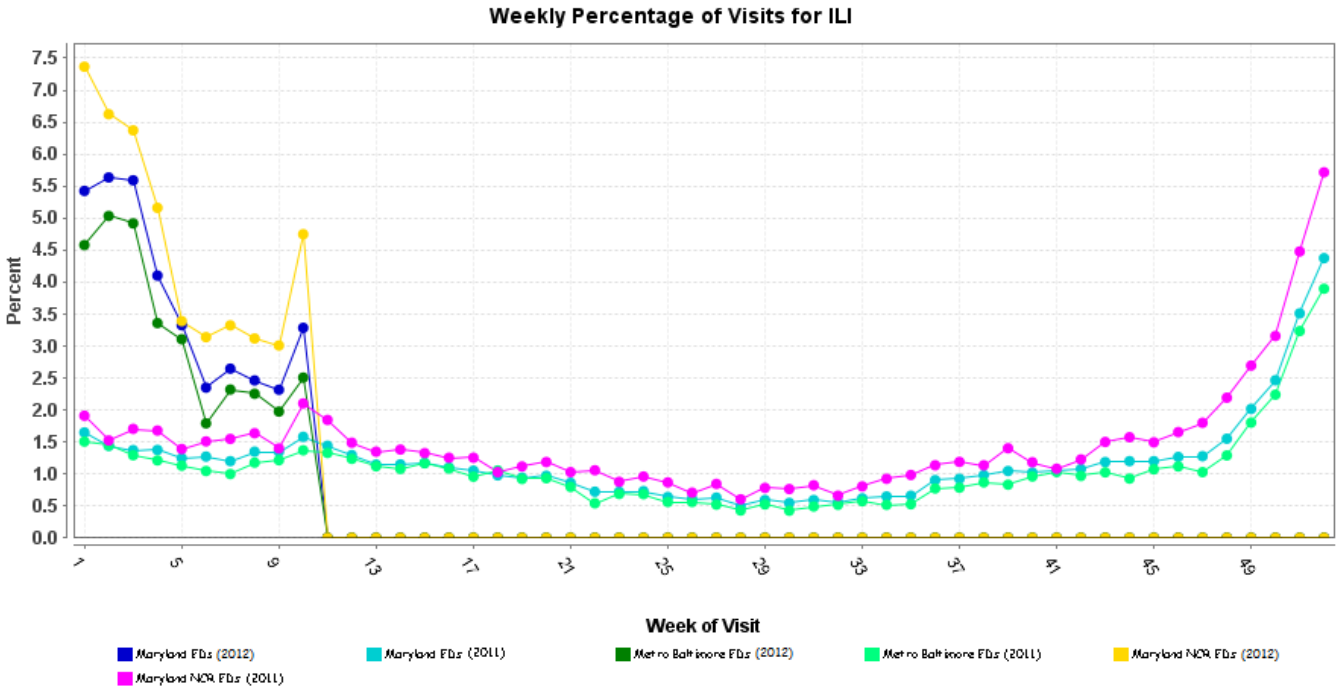
MARYLAND SEASONAL FLU STATUS

Seasonal Influenza reporting occurs October through May. Seasonal influenza activity for Week 9 was: Regional Activity with Minimal Intensity.

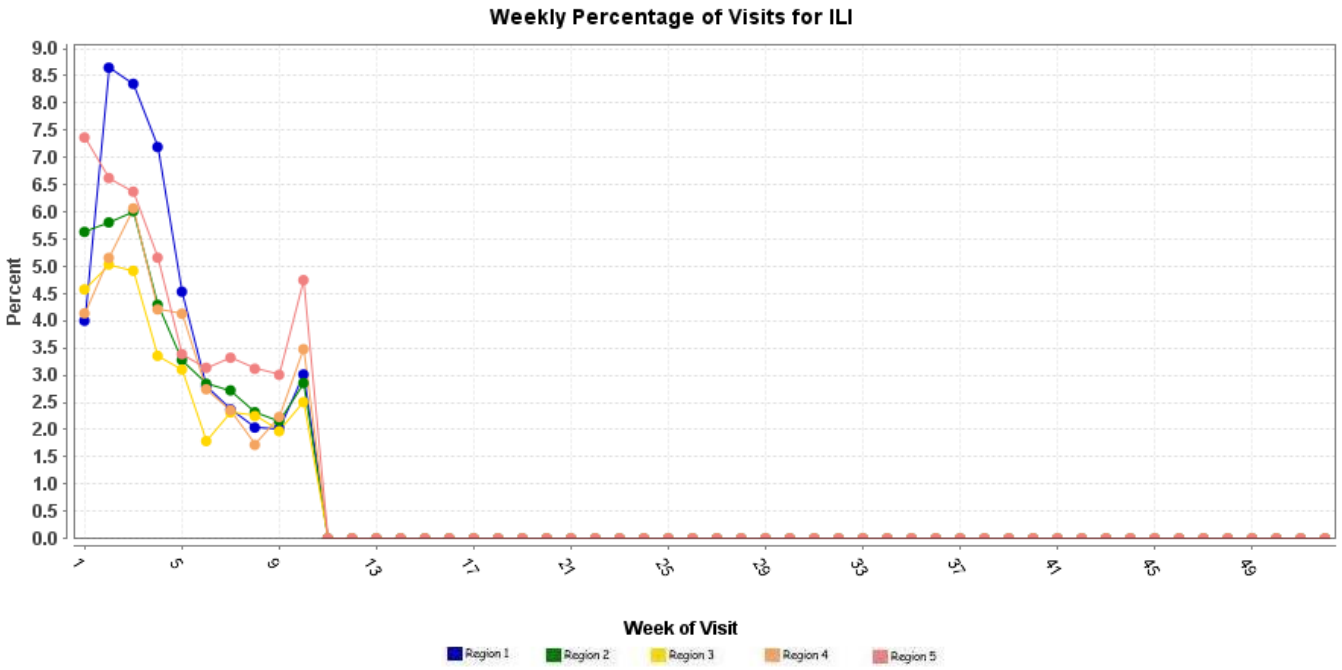
SYNDROMIC SURVEILLANCE FOR INFLUENZA-LIKE ILLNESS

Graphs show the percentage of total weekly Emergency Department patient chief complaints that have one or more ICD9 codes representing provider diagnoses of influenza-like illness. These graphs do not represent confirmed influenza.

Graphs show proportion of total weekly cases seen in a particular syndrome/subsyndrome over the total number of cases seen. Weeks run Sunday through Saturday and the last week shown may be artificially high or low depending on how much data is available for the week.



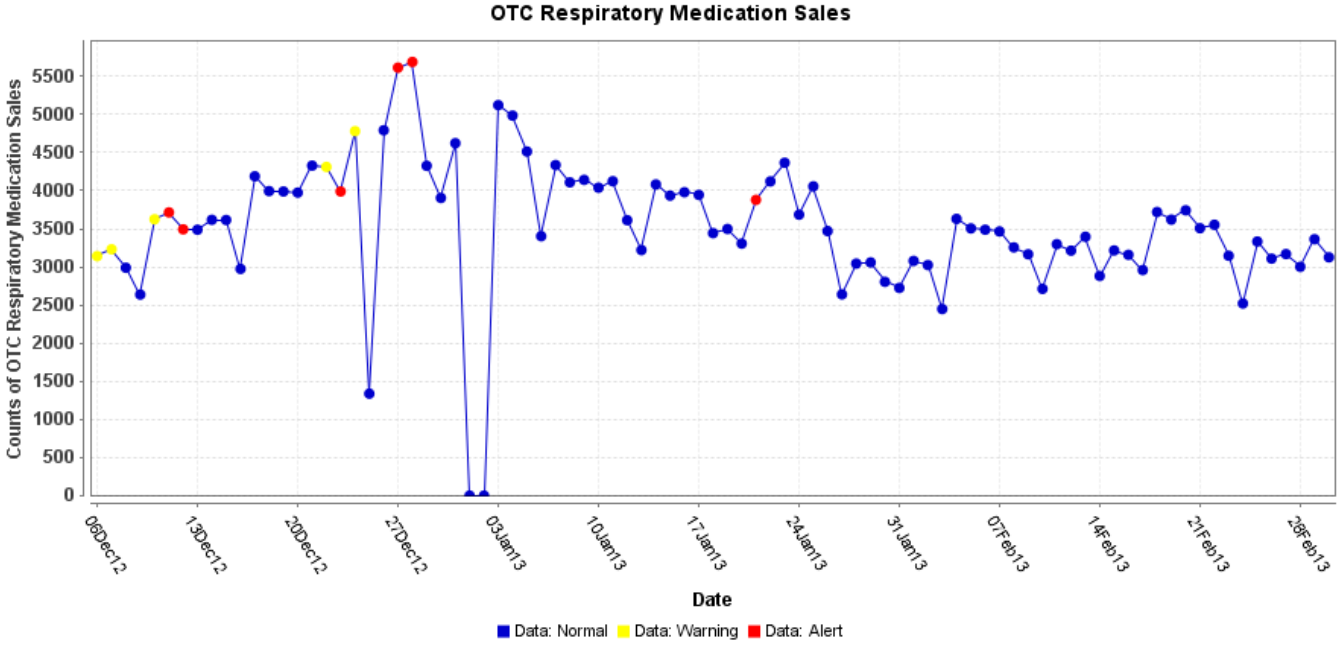
* Includes 2012 and 2013 Maryland ED visits for ILI in Metro Baltimore (Region 3), Maryland NCR (Region 5), and Maryland Total



*Includes 2013 Maryland ED visits for ILI in Region 1, 2, 3, 4, and 5

OVER-THE-COUNTER (OTC) SALES FOR RESPIRATORY MEDICATIONS:

Graph shows the daily number of over-the-counter respiratory medication sales in Maryland at a large pharmacy chain.



PANDEMIC INFLUENZA UPDATE / AVIAN INFLUENZA-RELATED REPORTS

WHO update: The current WHO phase of pandemic alert for avian influenza is 3. Currently, the avian influenza H5N1 virus continues to circulate in poultry in some countries, especially in Asia and northeast Africa. This virus continues to cause sporadic human infections with some instances of limited human-to-human transmission among very close contacts. There has been no sustained human-to-human or community-level transmission identified thus far.

In **Phase 3**, an animal or human-animal influenza reassortant virus has caused sporadic cases or small clusters of disease in people, but has not resulted in human-to-human transmission sufficient to sustain community-level outbreaks. Limited human-to-human transmission may occur under some circumstances, for example, when there is close contact between an infected person and an unprotected caregiver. However, limited transmission under such restricted circumstances does not indicate that the virus has gained the level of transmissibility among humans necessary to cause a pandemic. As of February 15, 2013, the WHO-confirmed global total of human cases of H5N1 avian influenza virus infection stands at 620, of which 367 have been fatal. Thus, the case fatality rate for human H5N1 is approximately 59%.

AVIAN INFLUENZA (CAMBODIA): 27 February 2013, On Sat 23 Feb 2013, L'Institut Pasteur du Cambodge confirmed the 9th human case of avian influenza A(H5N1) virus infection in a 35-year-old man from Kbal Ou village, Me Sar Chrey commune, Stueng Trang district in Kampong Cham province. He developed fever on 8 Feb 2013 and his condition worsened on 10 Feb 2013 with fever, frequent cough, and dyspnea. Local private practitioners initially treated him but his condition further deteriorated. On 13 Feb 2013 he was admitted to the Kampong Cham Hospital with fever, severe cough, and dyspnea and was immediately treated with Tamiflu. He developed pneumonia on 21 Feb 2013 and was transferred to Calmette Hospital in Phnom Penh. Unfortunately, despite intensive medical care, he died on 25 Feb 2013. There is evidence of recent deaths among poultry in the village and the man had a history of coming into contact with sick poultry prior to becoming sick. The man is the 9th person this year [2013], the 30th person to become infected with the H5N1 virus, and the 27th person to die from complications of the disease in Cambodia.

NATIONAL DISEASE REPORTS*

LEGIONELLOSIS (PENNSYLVANIA): 26 February 2013, The strain of bacteria that caused a fatal outbreak of legionnaires' disease in the Veterans Affairs [VA] hospital in Oakland is "almost identical" to the bug that caused a lethal outbreak there more than 30 years ago, according to documents obtained by the Tribune-Review. [The VA Oakland campus is located in Oakland, a neighborhood in the city of Pittsburgh, where the University of Pittsburgh Medical Center is also located. The *Legionella* bacteria, linked to 5 deaths and possibly a sixth, might have survived in the water system at the University Drive hospital since 1982 despite decades of hot-water flushes, cycles of chemical disinfectant, and the installation of a copper-silver ionization system designed to kill it, according to a Centers for Disease Control and Prevention report issued in January [2013]. Bacteria that the CDC found in October [2012] when investigating the most recent outbreak match 5 of 7 genes with the 1982 bacteria. "This indicates the *Legionella* found in the hospital in 1982 is almost identical to the *Legionella* found in this outbreak, suggesting that the pathogenic strain may have persisted in the hospital's water system for many years," the CDC said. Layers of slime and calcium in pipes could shelter the bacteria, said Janet Stout, a microbiologist who worked on the research team that responded to the 1982 outbreak. "It's never completely killed because, as you can imagine, a water distribution system has many pipes, many sections" that disinfecting treatments might not reach, said Stout, who later worked in the VA Oakland pathogens lab before it was abruptly closed. VA spokesman David Cowgill declined to comment, citing "pending investigations and legal claims." The VA Inspector General's Office and a subcommittee under the House Committee on Veterans' Affairs are separately reviewing the outbreak. US Attorney David J Hickton in Pittsburgh pledged to look into it when the inspector general's report is completed in March [2013]. The family of a veteran said it plans to sue the VA. [The veteran], 87, died of legionnaires' disease in November [2012] in the Oakland hospital. The recent outbreak in the VA's Oakland and O'Hara facilities sickened as many as 21 patients from January 2011 through October 2012. Five of them died within 30 days of testing positive for legionnaires' disease, an acute respiratory infection. [The VA HJ Heinz campus is located in O'Hara Township, a few miles northeast of Pittsburgh]. Another veteran infected with *Legionella* died in January [2013] in the Oakland hospital, but tests have yet to show where the patient contracted the bacteria. The CDC did not test the water in the VA's HJ Heinz campus in O'Hara. Asked whether *Legionella* found in the VA Butler facility's water in December [2012] were the same strain as that which caused the Oakland outbreak, the CDC referred questions to the Butler VA. [The Butler VA is located in Butler, a city 35 miles (56 km) north of Pittsburgh.] Amanda Kurtz, spokeswoman for the Butler VA, said she was "checking on the answer" on Friday afternoon [22 Feb 2013] but did not later respond. The previous outbreak in VA Oakland occurred during a 3-year period ending in 1982, when the hospital diagnosed about 100 cases of legionnaires' disease -- 30 percent of them fatal, Stout said. Dr Victor Yu led the 1982 research team for the VA Pittsburgh Healthcare System, which fired him in 2006. The VA should have known this strain lurked in its water system and done more to monitor it, Yu said. "We know that it will come back if we don't monitor it," Yu told the Trib. "They should've monitored, but they didn't, and that's the whole scandal -- but you already know that." Epidemiologists say it's not surprising that the bacteria strain survived for so long in the hospital's water system. What sets this strain apart, however, is the key role it played 30 years ago in helping scientists learn how to detect and prevent outbreaks of legionnaires' disease. From the disease's discovery -- as a result of a 1976 outbreak in the Bellevue-Stratford hotel in Philadelphia -- until the 1982 study of the outbreak in the VA in Oakland, doctors believed mist from building cooling towers was the primary culprit in spreading legionnaires' disease, Stout said. In Pittsburgh, though, the disease occurred year-round, even when air conditioning was not in use. Yu, Stout, and other Pittsburgh VA researchers tied the infections to the Oakland hospital's water system, Stout said. "It was a game changer," said Stout, who left the VA 6 years ago to co-found with Yu the Special Pathogens Laboratory, Uptown. Because of the 1982 study by the Pittsburgh VA researchers, doctors look first to water systems when testing and preventing legionnaires' disease, she said. Dr Lauri Hicks, a CDC epidemiologist, said the bacterium in the recent outbreak could be considered a "granddaughter or grandson" of the 1982 strain. The CDC has not seen this strain elsewhere, Hicks said. "That was very important because it was very clear, given what we had from the patients and what we had from the environment, that this was a health care-associated outbreak. We have not investigated other outbreaks with that same strain," Hicks said. Dr Ronald Voorhees, acting chief of the Allegheny County Health Department, said the recent outbreak in the Oakland VA points to the need for national standards to monitor and treat water-distribution systems in health care facilities. "Unfortunately, there's not a national standard to say, 'This is what you should do to minimize the problem,' " Voorhees said. "People are trying different methods, and different methods are going to have different requirements." *Legionella* bacteria tend to survive in pipes, trapped in thin layers of microorganisms called biofilms, he said. "It's there, and it will re-establish itself, which is why treatments either have to be continuous or periodic to try to knock it back down," Voorhees said. "But you never completely get rid of it." Because of that, hospitals that experience *Legionella* outbreaks should step up surveillance and testing, according to an August 2005 paper in the American Journal of Infection Control co-authored by the late Allegheny County Health Department Chief Bruce Dixon, who died on Wednesday [20 Feb 2013]. In his last interview with the Trib on 13 Feb [2013], Dixon advocated aggressive monitoring for *Legionella* including testing hospital water systems, even if the disease was not identified in patients. "They tried to minimize and obfuscate the problem," Dixon said of the Pittsburgh VA system. "If I were associated with the VA, I'd be embarrassed as to what came out." (Water Safety Threats are listed in Category B on the CDC List of Critical Biological Agents) *Non-suspect case

INTERNATIONAL DISEASE REPORTS*

FOODBORNE ILLNESS (NORWAY): 28 February 2013, On the evening of 21 Jan 2012, the Norwegian Food Safety Authority, district office of Trondheim and Orkdal, was alerted to an outbreak of gastrointestinal disease among participants from several swimming clubs attending a swimming competition in Trondheim. Initial information was passed on in a private conversation between a swimming coach and an employee of the Food Safety Authority, who happened to be present at the swimming competition. Symptoms had started early that day. In response, the Food Safety Authority conducted a few enquires the same evening, which showed that the sick swimmers had stayed at the same hotel and that dinner at this hotel the previous evening (20 Jan 2012) was the only known meal common to all the swimming teams, clearly indicating a probable foodborne outbreak associated with this meal. The Food Safety Authority launched an investigation, according to standard procedures, aimed at preventing possible continuation of the outbreak, describing the outbreak, identifying the source and causal agent, and if possible advise on preventive measures. (Food Safety Threats are listed in Category B on the CDC List of Critical Biological Agents) *Non-suspect case

HANTAVIRUS (PANAMA): 1 March 2013, Jenny Guerra, Regional Director of the Veraguas Ministry of Health confirmed a new case of a hantavirus infection in the Sona district. Guerra said that the patient is a resident of the Trinchera community, but some 15 days earlier had been in the Pacora area, where investigations have been initiated by the Epidemiology Department. The physician stated that in the province, 4 hantavirus infections have been reported with the death of one patient. She insisted that residents must maintain sanitary measures in their houses and establishments, especially those places where grain is stored to avoid rodents coming in. (Hantavirus is listed in Category C on the CDC List of Critical Biological Agents) *Non-suspect case

*National and International Disease Reports are retrieved from http://www.promedmail.org/.

OTHER RESOURCES AND ARTICLES OF INTEREST

More information concerning Public Health and Emergency Preparedness can be found at the Office of Preparedness and Response website: http://preparedness.dhmh.maryland.gov/

Maryland's Resident Influenza Tracking System: http://dhmh.maryland.gov/flusurvey

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NOTE: This weekly review is a compilation of data from various surveillance systems, interpreted with a focus on a potential BT event. It is not meant to be inclusive of all epidemiology data available, nor is it meant to imply that every activity reported is a definitive BT event. International reports of outbreaks due to organisms on the CDC Critical Biological Agent list will also be reported. While not "secure", please handle this information in a professional manner. Please feel free to distribute within your organization, as you feel appropriate, to other professional staff involved in emergency preparedness and infection control.

For questions about the content of this review or if you have received this and do not wish to receive these weekly notices, please e-mail me. If you have information that is pertinent to this notification process, please send it to me to be included in the routine report.

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Table: Text-based Syndrome Case Definitions and Associated Category A Conditions

Syndrome	Definition	Category A Condition
Botulism-like	ACUTE condition that may represent exposure to botulinum toxin ACUTE paralytic conditions consistent with botulism: cranial nerve VI (lateral rectus) palsy, ptosis, dilated pupils, decreased gag reflex, media rectus palsy. ACUTE descending motor paralysis (including muscles of respiration) ACUTE symptoms consistent with botulism: diplopia, dry mouth, dysphagia, difficulty focusing to a near point.	Botulism
Hemorrhagic Illness	SPECIFIC diagnosis of any virus that causes viral hemorrhagic fever (VHF): yellow fever, dengue, Rift Valley fever, Crimean-Congo HF, Kyasanur Forest disease, Omsk HF, Hantaan, Junin, Machupo, Lassa, Marburg, Ebola ACUTE condition with multiple organ involvement that may be consistent with exposure to any virus that causes VHF ACUTE blood abnormalities consistent with VHF: leukopenia, neutropenia, thrombocytopenia, decreased clotting factors, albuminuria	VHF
Lymphadenitis	ACUTE regional lymph node swelling and/ or infection (painful bubo- particularly in groin, axilla or neck)	Plague (Bubonic)
Localized Cutaneous Lesion	SPECIFIC diagnosis of localized cutaneous lesion/ ulcer consistent with cutaneous anthrax or tularemia ACUTE localized edema and/ or cutaneous lesion/ vesicle, ulcer, eschar that may be consistent with cutaneous anthrax or tularemia INCLUDES insect bites EXCLUDES any lesion disseminated over the body or generalized rash EXCLUDES diabetic ulcer and ulcer associated with peripheral vascular disease	Anthrax (cutaneous) Tularemia
Gastrointestinal	ACUTE infection of the upper and/ or lower gastrointestinal (GI) tract SPECIFIC diagnosis of acute GI distress such as Salmonella gastroenteritis ACUTE non-specific symptoms of GI distress such as nausea, vomiting, or diarrhea EXCLUDES any chronic conditions such as inflammatory bowel syndrome	Anthrax (gastrointestinal)

Syndrome Definitions for Diseases Associated with Critical Bioterrorism-associated Agents
(continued from previous page)

Syndrome	Definition	Category A Condition
Respiratory	ACUTE infection of the upper and/ or lower respiratory tract (from the oropharynx to the lungs, includes otitis media) SPECIFIC diagnosis of acute respiratory tract infection (RTI) such as pneumonia due to parainfluenza virus ACUTE non-specific diagnosis of RTI such as sinusitis, pharyngitis, laryngitis ACUTE non-specific symptoms of RTI such as cough, stridor, shortness of breath, throat pain EXCLUDES chronic conditions such as chronic bronchitis, asthma without acute exacerbation, chronic sinusitis, allergic conditions (Note: INCLUDE *acute exacerbation* of chronic illnesses.)	Anthrax (inhalational) Tularemia Plague (pneumonic)
Neurological	ACUTE neurological infection of the central nervous system (CNS) SPECIFIC diagnosis of acute CNS infection such as pneumoccocal meningitis, viral encephailitis ACUTE non-specific diagnosis of CNS infection such as meningitis not otherwise specified (NOS), encephailitis NOS, encephalopathy NOS ACUTE non-specific symptoms of CNS infection such as meningismus, delerium EXCLUDES any chronic, hereditary or degenerative conditions of the CNS such as obstructive hydrocephalus, Parkinson's, Alzheimer's	Not applicable
Rash	ACUTE condition that may present as consistent with smallpox (macules, papules, vesicles predominantly of face/arms/legs) SPECIFIC diagnosis of acute rash such as chicken pox in person > XX years of age (base age cut-off on data interpretation) or smallpox ACUTE non-specific diagnosis of rash compatible with infectious disease, such as viral exanthem EXCLUDES allergic or inflammatory skin conditions such as contact or seborrheaic dermatitis, rosacea EXCLUDES rash NOS, rash due to poison ivy, sunburn, and eczema	Smallpox
Specific Infection	ACUTE infection of known cause not covered in other syndrome groups, usually has more generalized symptoms (i.e., not just respiratory or gastrointestinal) INCLUDES septicemia from known bacteria INCLUDES other febrile illnesses such as scarlet fever	Not applicable

Syndrome Definitions for Diseases Associated with Critical Bioterrorism-associated Agents (continued from previous page)

Syndrome	Definition	Category A Condition
Fever	ACUTE potentially febrile illness of origin not specified INCLUDES fever and septicemia not otherwise specified INCLUDES unspecified viral illness even though unknown if fever is present EXCLUDE entry in this syndrome category if more specific diagnostic code is present allowing same patient visit to be categorized as respiratory, neurological or gastrointestinal illness syndrome	Not applicable
Severe Illness or Death potentially due to infectious disease	ACUTE onset of shock or coma from potentially infectious causes EXCLUDES shock from trauma INCLUDES SUDDEN death, death in emergency room, intrauterine deaths, fetal death, spontaneous abortion, and still births EXCLUDES induced fetal abortions, deaths of unknown cause, and unattended deaths	Not applicable